

Claims

What is claimed is:

1. A method for matching orders comprising the steps of:
receiving a plurality of orders from a plurality of participants to buy and/or sell a plurality of products, each order being a unilateral order from one of said participants identifying a number of units of one of said products to buy or sell;
setting swap prices for said products; and
matching units of said orders based on constrained net activity for said participants and said products to maximize a number of units matched to obtain matched orders and unmatched orders, said matching independent of said swap prices.
2. A method as in claim 1, wherein said matching based on constrained net activity for said participants comprises matching units of orders such that a number of units to buy for a participant equals a number of units to sell for said participant.
3. A method as in claim 2, wherein said number of units to buy and said number of units to sell are weighted with non-unitary weightings.
4. A method as in claim 3, wherein said non-unitary weightings are based on said swap prices.

5. A method as in claim 1, wherein said matching based on constrained net activity for said products comprises matching units of orders such that a number of units to buy for a product equals a total volume of units to sell for said product.

6. A method as in claim 1, wherein said matching to maximize a volume of units matched comprises matching units of orders such that a number of units to buy and to sell is maximized.

7. A method as in claim 6, wherein said number of units to buy and to sell is weighted with non-unitary weightings.

8. A method as in claim 7, wherein said non-unitary weightings are based on said swap prices.

9. A method as in claim 1, wherein each of said unilateral orders is irrespective of a price to buy or sell.

10. A method as in claim 1, wherein at least one participant submits a plurality of unilateral orders.

11. A method as in claim 1, wherein said unilateral orders are received electronically via a network.

12. A method as in claim 1, further comprising the step of determining valuation differences for each participant based on said matched orders and said swap prices.

13. A method as in claim 12, wherein said matching to maximize a volume of units matched comprises minimizing said valuation differences.

14. A method as in claim 1, further comprising the step of notifying each participant having at least one matched order of said matched order.

15. A method as in claim 14, wherein each participant is notified electronically via a network.

16. A method as in claim 1, wherein said matching occurs after expiration of a period for receiving orders.

17. A method as in claim 16, further comprising a next period for receiving orders, said next period occurring after said matching, wherein orders for said next period include unmatched orders from said period.

18. A method as in claim 1, wherein said matching occurs after each order is received.

19. A method as in claim 1, wherein said matching uses linear programming.

20. A method as in claim 1, wherein said matching uses quadratic or higher-order programming.

21. A method as in claim 1, further comprising the step of determining a priority for each order.

22. A method as in claim 21, wherein said matching further comprises matching of units of said orders based on priorities of said orders.

23. A method as in claim 22, wherein said matching uses quadratic or higher-order programming.

24. A method as in claim 22, wherein said matching uses iterative linear programming to match orders having higher priority over orders having lower priority.

25. A method as in claim 24, wherein said matching uses heuristics to hot start or cold start iterations of said iterative linear programming.

26. A method as in claim 1, wherein said prices are determined based on at least one of current market prices, knowledge of said products, and a financial model of said products.

27. A method as in claim 1, further comprising the step of swapping said matched orders and money to obtain swapped orders and swapped money.

28. A method as in claim 1, wherein said products comprise at least one of commodities, securities, financial contracts, money, and any combination thereof.

29. A computer for performing the method of claim 1.

30. A computer-readable medium having software for performing the method of claim 1.

31. A system for matching orders comprising:

means for receiving a plurality of orders from a plurality of participants to buy and/or sell a plurality of products, each order being a unilateral order from one of said participants identifying a number of units of one of said products to buy or sell;

means for setting swap prices for said products; and

means for matching units of said orders based on constrained net activity for said participants and said products to maximize a volume of units matched to obtain matched orders and unmatched orders, said matching independent of said swap prices.

32. A system as in claim 31, wherein said means for matching further comprises matching of units of said orders based on priorities of said orders.